AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-11. (cancelled)

12. (currently amended) A complex matrix comprising: at least one biocompatible polymer of natural origin, cross linked with a cross linking agent of a bi- or polyfunctional molecule selected from the group consisting of ~~epoxydes~~epoxides, epihalohydrines and divinylsulfone and wherein said polymer has grafted chains having a molecular weight less than 50,000 Da, selected from polymers of natural origin of small size, and/or non-polymeric chains having antioxidant properties or properties for inhibiting reactions of degradation of said matrix, and

wherein the quantity of grafting is defined as being the ratio between the number of moles of grafted molecules and the number of moles of units of the polymer, from 10 to 40%.

13. (previously presented) The matrix according to claim 12, wherein the biocompatible polymer of natural origin is selected from the group consisting of hyaluronic acid, chondroitine sulfate, keratane, keratane sulfate, heparin,

heparin sulfate, cellulose and its derivatives, xanthanes, alginates, proteins, and nucleic acid.

14. (withdrawn) The matrix according to claim 12, wherein the biocompatible polymer of natural origin is a polymer not naturally present in the human body and selected from the group consisting of a cellulosic derivative, a xanthane, and an alginate, which is cross linked with at least one polymer naturally present in the human body selected from the group consisting of hyaluronic acid, chondroitine sulfate, keratane, keratane sulfate, heparin, heparane sulfate, xanthanes, alginates, proteins and nucleic acids.

15. (previously presented) The matrix according to claim 12, wherein the amount of cross linkage, defined as the ratio between the number of moles of the cross linking agent ensuring the linking of the polymer chains and the number of moles of units of the polymer, is comprised between 0.5 and 50% in the case of injectable products, and between 25 and 50% in the case of solid products.

16. (currently amended) The matrix according to claim 12, containing at least one selected from the group consisting of antioxidant agents, vitamins and other dispersed pharmacologically active agents.

17. (previously presented) The according to claim 12, containing vitamins or other dispersed pharmacologically active agents.

18. (withdrawn) A method to separate, replace, fill or supplement a biological fluid or tissues comprising a step of applying an effective amount of a matrix according to claim 12.

19. (withdrawn) A process for the preparation of a partly biodegradable biocompatible matrix constituted by at least one polymer of natural origin, characterized in that it comprises:

- grafting small chains of molecular weight lower than 50,000 Da with an amount of grafting of 10 to 40%, the small chains being selected from polymers of natural origin of small size, and/or unpolymerized chains having antioxidant properties or properties of inhibiting reactions of degradation of said matrix, or

- cross linking the principal chains of the polymer to create a homogeneous matrix, with the help of a cross linking agent which is a bi- or polyfunctional molecule selected from epoxydes, epihalohydrines or divinylsulfone.

20. (withdrawn) The matrix according to claim 13, wherein the biocompatible polymer of natural origin is a polymer not naturally present in the human body selected from the group consisting of cellulosic derivative, a xanthane and an alginate, which is cross linked with at least one polymer naturally present in the human body selected from the group consisting of hyaluronic acid, chondroitine sulfate, keratane, keratane sulfate, heparin, heparane sulfate, xanthanes, alginates, proteins, and nucleic acids.

21. (previously presented) The matrix according to claim 13, wherein the amount of cross linkage, defined as the ratio between the number of moles of the cross linking agent ensuring the linking of the polymer chains and the number of moles of units of the polymer, is comprised between 0.5 and 50% in the case of injectable products, and between 25 and 50% in the case of solid products.

22. (withdrawn) The matrix according to claim 14, wherein the amount of cross linkage, defined as the ratio between the number of moles of the cross linking agent ensuring the linking of the polymer chains and the number of moles of units of the polymer, is comprised between 0.5 and 50% in the case of injectable products, and between 25 and 50% in the case of solid products.

23. (previously presented) The matrix according to claim 13, containing antioxidant agents, vitamins and other dispersed pharmacologically active agents.

24. (withdrawn) The matrix according to claim 14, containing antioxidant agents, vitamins and other dispersed pharmacologically active agents.

25. (previously presented) The matrix according to claim 15, containing antioxidant agents, vitamins and other dispersed pharmacologically active agents.

26. (previously presented) The matrix according to claim 13, containing vitamins or other dispersed pharmacologically active agents.

27. (withdrawn) The matrix according to claim 14, containing vitamins or other dispersed pharmacologically active agents.

28. (previously presented) The matrix according to claim 15, containing vitamins or other dispersed pharmacologically active agents.

29. (previously presented) The matrix according to claim 16, containing vitamins or other dispersed pharmacologically active agents.

30. (withdrawn) A method to separate, replace, fill or supplement a biological fluid or tissues comprising a step of applying an effective amount of a matrix according to claim 13.

31. (withdrawn) A method to separate, replace, fill or supplement a biological fluid or tissues comprising a step of applying an effective amount of a matrix according to claim 14.